

(12) UK Patent Application (19) GB (11) 2 272 475 (13) A

(43) Date of A Publication 18.05.1994

(21) Application No 9223968.0

(22) Date of Filing 16.11.1992

(71) Applicant(s)

Paul Darrel Blud
64a Prince Regent Lane, Plaistow, LONDON, E13 8QQ,
United Kingdom

(72) Inventor(s)

Paul Darrel Blud

(74) Agent and/or Address for Service

Denis I Tapp
95 Amberley Road, Abbey Wood, LONDON, SE2 0SG,
United Kingdom

(51) INT CL⁵

E06C 7/42

(52) UK CL (Edition M)

E1S SLW2

(56) Documents Cited

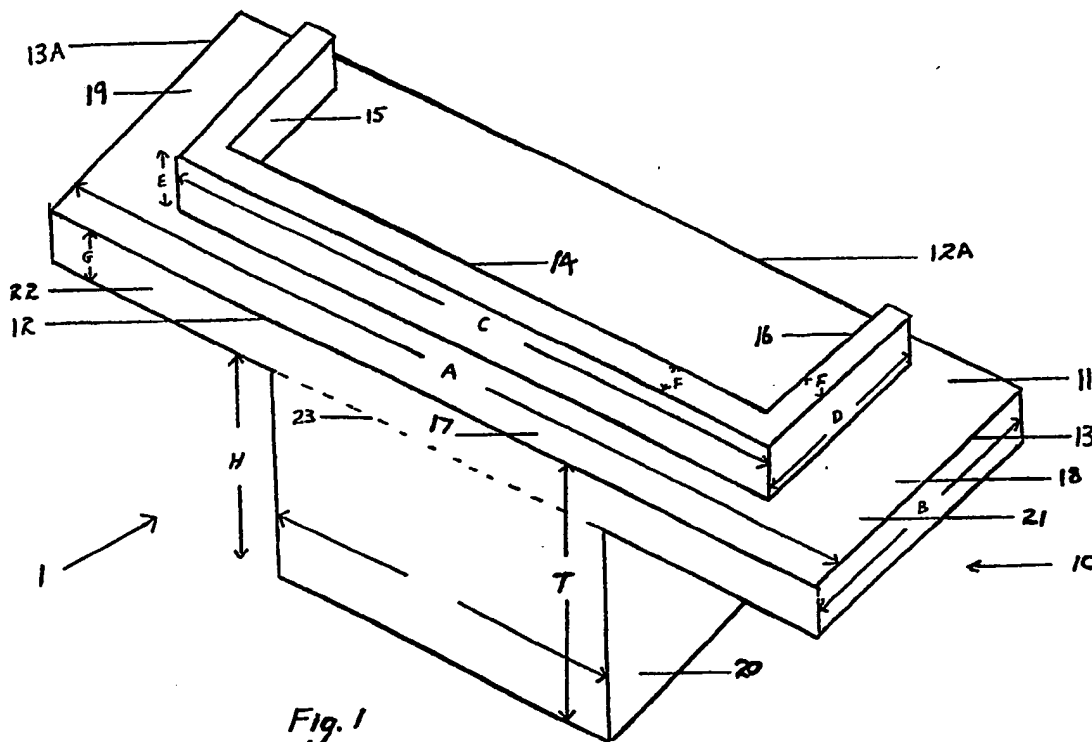
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(58) Field of Search

UK CL (Edition L) E1S SLW2 SLW3
INT CL⁵ E06C
ONLINE DATABASE: WPI

(54) Ladder support

(57) A ladder support intended to be permanently implanted in the ground comprises a block having a main portion 10 with a planar surface 11 on which is provided an integral linear wall 14 against which the feet of a ladder may abut to prevent slipping. The block has wings 21, 22, for stability. Side walls 15, 16, are provided. The thickness T is at least 25% of the overall length C of the linear wall 14. Other configurations may have a mushroom shape with superposed coaxial circular cylindrical portions. The block may be made of concrete, plastics or bricks and mortar.



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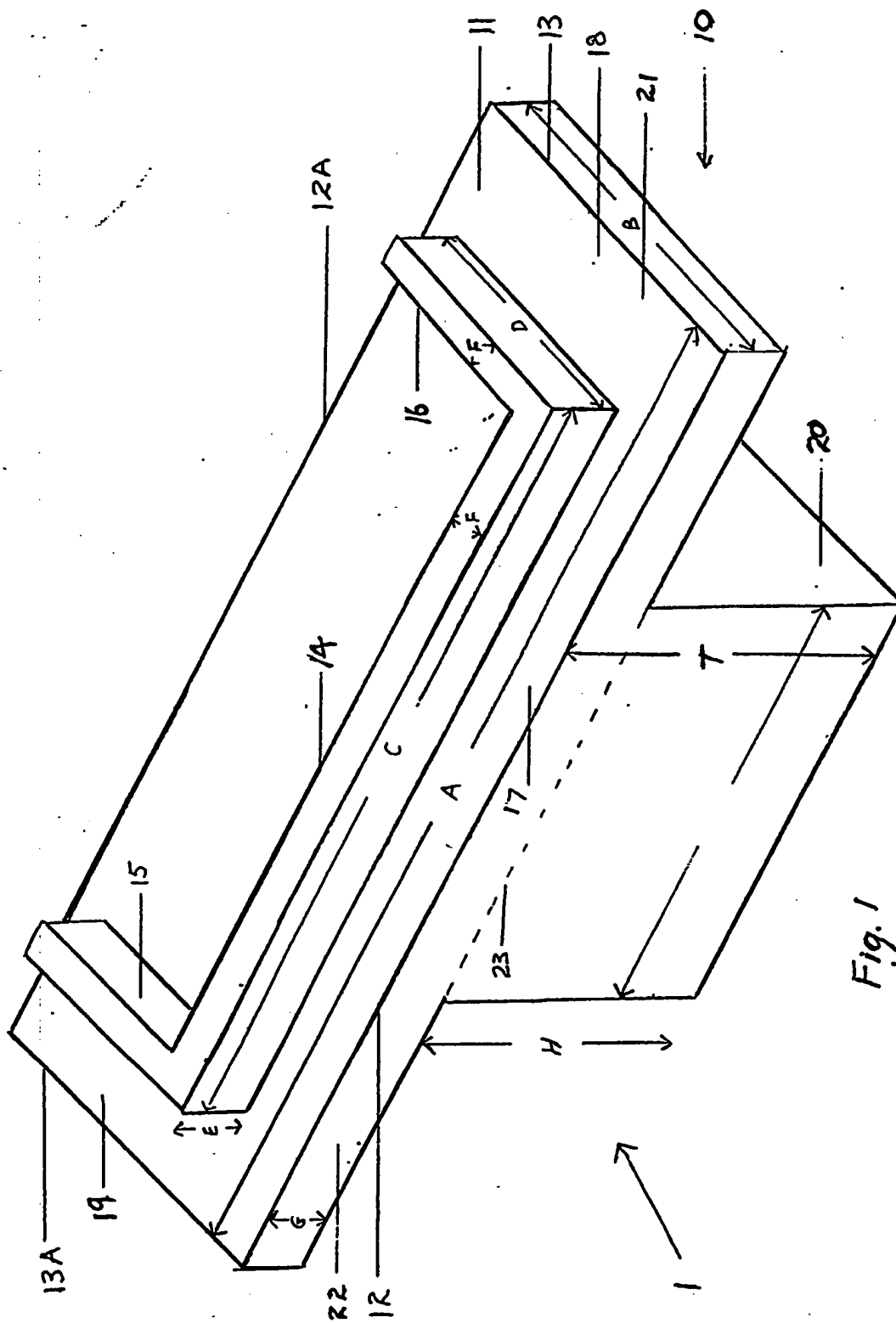
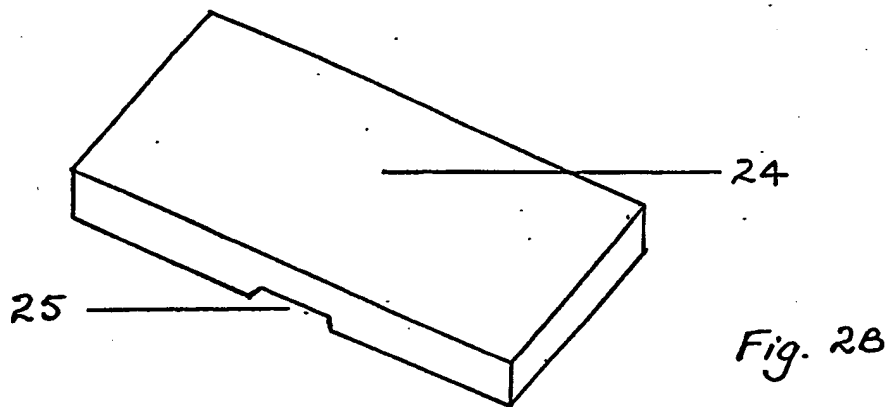
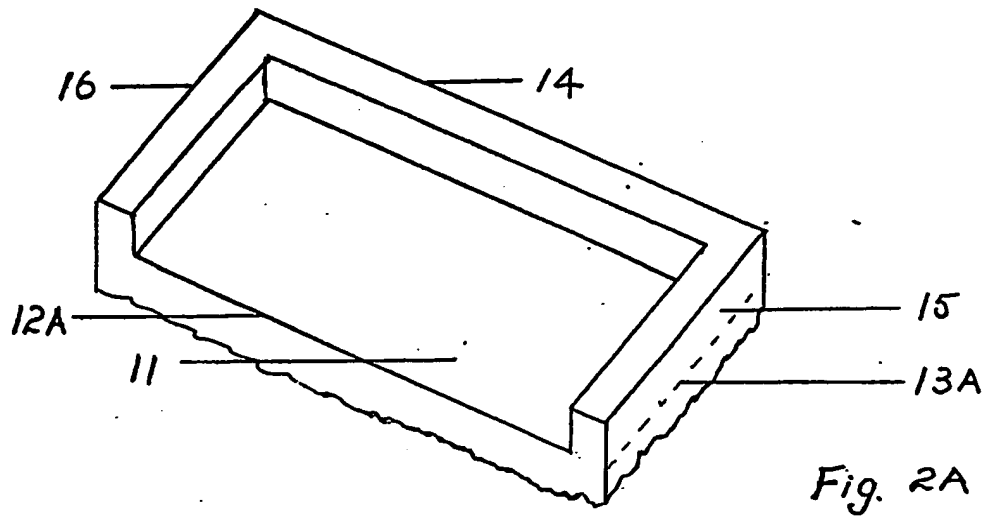


Fig. 1



SPECIFICATION

LADDER SUPPORT

DescriptionTechnical Field

The invention relates to a ladder support.

Background Art

It is well known that the use of ladders can be hazardous, especially when these are used for such purposes as the cleaning of the windows of small buildings when frequent movements of the ladder are necessary. In these circumstances the time and means for effective securement of the bottom of the ladder by ropes are usually not available.

Many buildings are surrounded by flower beds and lawns which must be avoided when a ladder is used, and, in consequence, it is known to provide ladder supports in the form of slabs or flags permanently disposed at appropriate positions around the building, such supports having a wholly planar upper surface. However, such supports can allow the foot of a ladder to slip, especially when wet. Moreover, such slabs or flags tend, with time, to tilt from the horizontal position adding to the dangers of slipping. It is therefore an object of the invention to provide an improved ladder support which overcomes the above drawbacks.

Disclosure of the Invention

According to the invention a ladder support comprises a block having a main body with a substantially planar upper surface upon which is provided an integral upstanding linear wall against which, in use, the feet of a ladder may rest.

In use the block may be sunk into the ground at an appropriate position outside a building with the planar surface horizontal and the linear wall parallel to the adjacent face of the building.

Advantageously, integral side walls may be provided on the planar surface at the ends of the linear wall and extending at right angles thereto. Such walls minimise the movement of the foot of the ladder should this undergo a sideways displacement.

Conveniently, the planar surface of the main body of the block may be rectangular, and the linear wall may be parallel to the long side of the rectangle.

Conveniently also, the main body of the block may have the form of a rectangular parallelepiped. However, advantageously, the thickness of the main body, measured perpendicularly to the planar surface, at two opposed ends is reduced relative to that at a central region, thereby producing a pair of horizontally extending wings adjacent to the planar surface. It will be clear that in such a case the main body may be regarded as two superposed rectangular parallelepipeds the upper one being of greater length than the lower one in order to provide the wings. It is also clear that the main body may have the shape of two superposed parallelepipeds in which both the length and breadth of the upper one are greater than for the lower one providing two pairs of opposed horizontally extending wings.

In a further arrangement the main body may be mushroom-shaped, comprising two coaxial circular cylindrical portions, the upper one providing the planar surface and having a diameter greater than that of the lower one,

Advantageously, the thickness of the main body, as measured from the planar surface, is, at its maximum, at least 25% of the overall length of the linear wall, and preferably at least 50% of the length of that wall.

Advantageously, also, a separate supplementary block may be associated with the ladder support which, when disposed on the planar surface, effects with the top surface(s) of the wall(s) a planar surface.

The above and other features and advantages of the invention will become apparent from the description which follows.

Brief Description of the Drawings

Figure 1 is an isometric view of an embodiment of a ladder support according to the invention.

Figure 2A is a fragmentary view of a modification of the ladder support of *Figure 1*.

Figure 2B shows a supplementary block associateable with the support of *Figure 2A*.

Modes for carrying out the invention

An embodiment will now be described with reference to the Figures of the drawing.

As shown in *Figure 1* a ladder support shown generally at 1 comprises an integral block of concrete with a main body shown generally at 10 having a planar upper surface 11. The surface is rectangular in plan having long sides 12, 12A, and short sides 13, 13A.

Upstanding from the surface 11 and integral therewith is a linear wall 14 disposed parallel to the long sides 12, 12A. The wall is such that with a ladder standing on the surface 11 the feet of the ladder may abut the wall 14 and thereby be prevented from sliding outwardly.

Two further upstanding walls 15, 16, extend perpendicularly to the wall 14 from the ends thereof, these walls limiting any lateral movement of the foot of the ladder.

As shown in Figure 1 the walls 14, 15, 16, are offset inwardly from the sides 13, 12, 13A, of the surface 11 to leave areas 17, 18, 19, such that the surface 11 may be more readily aligned with the surrounding ground during initial positioning of the support.

However, the walls 14, 15, 16, may be disposed on the surface 11 at extreme positions where their outer faces align with the sides 13, 12, 13A, of the surface 11 as shown in Figure 2A. In this case a separate removable supplementary block 24 of generally rectangular parallelepipedal shape may be provided as shown in Figure 2B. The block 24 has a thickness equal to the height of the walls 13, 14, 15, and fits into the space between the walls, so that the block 24 and the walls 13, 14, 15, provide a common planar upper surface, and substantially overlie all of the surface 11. In these circumstances, the support may be disposed with the top surfaces of the walls 14, 15, 16, level with the surrounding ground. With the block 24 in position a planar walking surface level with the surroundings is provided. In use the block 24 is removed to reveal the walls 14, 15, 16, and to this end a hand engageable recess 25 is provided in the block 24.

It is desirable that the thickness T of the main body when measured from the surface 11 should at its maximum be at least 25% of the overall length of the linear wall, and preferably at least 50% of that length. The linear wall 14 has a length suitable to readily accommodate all ladders of normally available dimensions.

It will be apparent to the man skilled in the art that the invention embraces a support whose main body is in the form of a rectangular parallelepiped based on the rectangular surface 11. However, in the preferred embodiment shown in the Figure, the thickness of the main body is reduced at at opposite ends to leave a core portion 20 and two horizontally extending wings 21, 22. This structure may also be envisaged as two superposed rectangular parallelepipeds conjoined at the

plane indicated by the dashed line 23, the upper one having a greater length than the lower one. It will further be apparent that if both the length and breadth of the upper parallelepiped were increased a main body having two pairs of opposed horizontally extending wings would result. The provision of wings not only reduces the cost from that of a solid parallelepiped of equal surface area, but also increases the stability against tilting.

The invention also embraces a support whose main body is of mushroom shape comprising two superposed coaxial circular cylindrical portions the upper one having a greater diameter than the lower one.

A typical support may have the following value for the dimensions indicated in the Figure: A=900mm; B=300mm; C=660mm; D=180mm; E=50mm; F=30mm; G=50mm; H=300mm; T=350mm.

Whilst as described above the ladder support is an integral casting of concrete, it can be of any suitable material. Thus, for example, it may be an integral plastics moulding or an integral structure of bricks and mortar. Similarly these materials may be used for the supplementary block when provided.

Numerous modifications and variations will be apparent to one skilled in the art without departing from the scope of the invention.

CLAIMS

1. A ladder support comprising a block having a main body with a substantially planar upper surface upon which is provided an integral upstanding linear wall against which, in use, the feet of a ladder may rest.
2. A ladder support as claimed in Claim 1, in which the main body has the shape of a rectangular parallelepiped.
3. A ladder support as claimed in Claim 1, in which the main body has the shape of two superposed rectangular parallelepipeds, the upper one providing the planar upper surface and having a length greater than that of the lower one to provide a pair of horizontally-extending wings.
4. A ladder support as claimed in Claim 3, in which the upper parallelepiped has a width greater than that of the lower one to provide two pairs of opposed horizontally-extending wings.
5. A ladder support as claimed in Claim 1, in which the main body is mushroom shaped, and comprises two superposed coaxial circular cylindrical portions, the upper one providing the planar surface and having a diameter greater than that of the lower one.
6. A ladder support as claimed in any preceding claim, in which integral side walls are provided on the planar surface at the ends of the linear wall and extend at right angles thereto.
7. A ladder support as claimed in Claim 1 or Claim 6 in association with a separate supplementary block of height equal to that of the wall or walls and of such shape that when positioned on the said upper planar surface effects with the top surface(s) of the wall or walls a substantially planar surface.
8. A ladder support as claimed in any preceding claim, in which the or each wall is disposed within the area of the planar surface such that a portion of that surface is exposed around the complete periphery.

9. A ladder support as claimed in any preceding claim, in which the thickness of the main body at its maximum is at least 25% of the overall length of the linear wall.
10. A ladder support as claimed in any preceding claim made of concrete.
11. A ladder support as claimed in any of Claims 1 to 9 made of plastics material.
12. A ladder support as claimed in any of Claims 1 to 9 made of bricks and mortar,
13. A ladder support substantially as described with reference to the accompanying drawings.

Relevant Technical fields

(i) UK CI (Edition L) E1S (SLW2, SLW3)

(ii) Int CI (Edition 5) E06C

Search Examiner

A H MITCHELL

Date of Search

8 FEBRUARY 1993

Databases (see over)

(i) UK Patent Office

(ii) ONLINE DATABASE: WPI

Documents considered relevant following a search in respect of claims 1-13

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2216168 A (WEATHERALL) - note the wall 11	1,2,11
X	GB 2160570 A (CRABBE) - see figure 4	1, 2
X	GB 2057040 (SHAYNE)	1,2,6,11
X	Do it Yourself July 1970 page 83	1, 2
X	Do it Yourself May 1978 page 77	1, 2

Category	Identity of document and relevant passages - 9 -	Relevant to claim

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

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